AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

What is claimed is:

1. (Currently amended) A tomography scanner system, comprising:

a base;

a gantry supported on the base and including,

an outer, non-rotating support ring,

an inner rotatable component ring supported for rotation on the support ring about a rotation axis of the gantry;

an x-ray source and an x-ray detector array secured to the rotatable component ring for rotation with the component ring; ~~and~~

an x-ray containment shield enclosing the x-ray source and the x-ray detector array and secured to the rotatable component ring for rotation with the component ring;

a first, non-rotating x-ray containment tunnel extending from an open end to the rotating x-ray containment shield coaxial with the rotation axis of the gantry, and a second, non-rotating x-ray containment tunnel extending from the rotating x-ray containment shield to an open end coaxial with the rotation axis of the gantry; and

a continuous conveyor belt including a forward path extending through the tunnels and the gantry and a return path extending outside the tunnels and the gantry.

2. A tomography scanner system according to claim 1, wherein the component ring includes a mounting face extending perpendicular to the rotation axis and the x-ray source, the x-ray detector array and the x-ray containment shield are secured to the mounting face of the component ring.

3. A tomography scanner system according to claim 1, wherein a motor is mounted on the support ring and operatively connected to the component ring through a belt received in an outer circumferential groove of the component ring.

4. (Currently amended) A tomography scanner system according to claim 1, wherein the x-ray source is a dual energy~~, helical cone beam, multi slice CT system~~ x-ray source.

5. (Currently amended) A tomography scanner system according to claim 1, wherein the x-ray detector is a ~~high efficiency, wide dynamic range, solid state,~~ two dimensional x-ray detector array.

6. A tomography scanner system according to claim 1, further comprising a data acquisition system for receiving and processing signals generated by the detector array, and an x-ray tube control system for supplying power to, and controlling the operation of, the x-ray source.

7. A tomography scanner system according to claim 6, further comprising a computer for processing the output of the data acquisition system and for generating the necessary signals for operating and controlling the system.

8. A tomography scanner system according to claim 1, wherein the rotating x-ray containment shield is lined with a material absorbent of x-ray energy incident.

9. A tomography scanner system according to claim 8, wherein the material absorbent of x-ray energy incident comprises lead.

10. (Canceled) A tomography scanner system according to claim 1, further comprising a first, non-rotating x-ray containment tunnel extending from an open end to the rotating x-ray containment shield coaxial with the rotation axis of the gantry, and a second, non-rotating x-ray containment tunnel extending from the rotating x-ray containment shield to an open end coaxial with the rotation axis of the gantry.

11. (Currently amended) A tomography scanner system according to claim ~~10~~ 1, wherein the tunnels are lined with a material absorbent of x-ray energy incident.

12. A tomography scanner system according to claim 11, wherein the material absorbent of x-ray energy incident comprises lead.

13. (Currently amended) A tomography scanner system according to claim ~~10~~ 1, wherein the open ends of the x-ray containment tunnels include curtains of x-ray absorbent material.

14. (Currently amended) A tomography scanner system according to claim ~~10~~ 1, wherein the non-rotating x-ray containment tunnels are connected to the rotatable x-ray containment shield through non-rotating fixed rings, wherein the x-ray containment shield is rotatable with respect to the fixed rings.

15. A tomography scanner system according to claim 14, wherein the non-rotating fixed rings include x-ray absorbent material.

16. A tomography scanner system according to claim 1, wherein the rotating x-ray containment shield includes an annular main body defining diametrically opposed x-ray source and x-ray detector apertures, and an x-ray source housing positioned over the x-ray source aperture and supporting and containing the x-ray source, and an x-ray detector housing positioned over the x-ray detector aperture and supporting and containing the x-ray detector.

17. A tomography scanner system according to claim 1, wherein the rotating x-ray containment shield comprises sheet metal lined with lead sheeting.

18. (Canceled) A tomography scanner system according to claim 1, further comprising a conveyor system extending within the tunnels and through the gantry between the open ends of the tunnels so that a piece of baggage placed on the conveyor system at one of the open ends will be carried through the gantry to the other of the open ends.

19. (Currently amended) A tomography scanner system according to claim ~~18~~ 1, wherein the ~~conveyor system includes a~~ continuous conveyor belt is supported by pulleys and at least one motor for rotating the pulleys to move the conveyor belt.

20. (Canceled) A tomography scanner system according to claim 18, wherein the continuous conveyor belt passes through the gantry only once.

21. (Currently amended) A tomography scanner system according to claim 19, ~~wherein the conveyor system also includes~~ further comprising skid plates extending between the pulleys and supporting the conveyor belt.

22. A tomography scanner system according to claim 21, wherein the skid plates include grooves which slidingly receive ridges of the conveyor belt.

23. A tomography scanner system according to claim 21, wherein the skid plates include ridges slidingly received in grooves of the conveyor belt.

24. A tomography scanner system according to claim 19, wherein the pulleys include grooves which receive ridges of the conveyor belt.